

REMARKS/ARGUMENTS

Claims 1-40 were pending in the present application. The present response amends claims 1-3, 7-9, 18-28, 32, 36, and 40, and does not cancel or add any new claims, leaving pending in the application claims 1-40. Reconsideration of the rejected claims is respectfully requested.

I. Objection to the Claims

Claims 32 and 36 are objected to for various informalities. In particular, claim 32 is objected to for lacking proper antecedent basis for the term "electronic watermark information detecting means" and claim 36 is objected to for lacking the word "be." Applicants appreciate the Examiner's helpful suggestions, and have amended the claims accordingly so that the claims should contain no objectionable informalities. These changes are supported by the specification and do not add new matter. Applicants therefore respectfully request that the objection to the claims be withdrawn.

II. Rejection under 35 U.S.C. §102

Claims 1, 2, 4, 5, 7, 8, 10, 11, 15, 16, and 18 are rejected under 35 U.S.C. §102(b) as being anticipated by *Suda* (US 6,639,996). Applicants respectfully submit that *Suda* does not disclose or suggest all elements recited in these claims.

For example, Applicants' claim 1 as amended recites an electronic watermark embedding apparatus for embedding an electronic watermark in image data, including:

- electronic watermark data generating means for generating data of an electronic watermark to be embedded in the image data;
- electronic watermark embedding means for embedding the electronic watermark in the image data;
- image information amount detecting means for detecting an amount of information of the image data in which the electronic watermark is to be embedded and for outputting a signal representing the detected image information amount; and
- encoding information detecting means for detecting encoding information from the image data in which the electronic watermark has been embedded and which has been encoded, and feeding the detected encoding information back to the electronic watermark embedding means,
- said electronic watermark embedding means controlling an amount of the electronic watermark data to be embedded in the image data according to the image information

amount signal detected by said image information amount detecting means and the encoding information detected by said encoding information detecting means and fed back to the electronic watermark embedding means

(emphasis added). Such limitations are not disclosed by *Suda*.

Suda discloses an image processing apparatus capable of concealing watermark information in image data (col. 1, line 66-col. 2, line 5). An electronic watermark generated by a watermark information generated circuit is concealed into the image data using a compression encoding circuit in the course of the encoding process (col. 3, lines 14-19). Image data entered into the compression encoding circuit is divided into blocks and fed to a motion detection circuit and an adder (col. 4, lines 1-6). Each block identified as showing motion is selected to have the electronic watermark superposed therewith through the adder (col. 4, lines 18-23). The block selection circuit, however, conceals the watermark information only in a frame in which motion is detected in a predetermined number of blocks, based on a predetermined frame interval obtained by a frame counter (col. 4, lines 23-30). As a result, "the watermark information is not concealed in the image data of all frames, but is superposed with the image data of the blocks with motion with a fixed frame interval or with a random frame interval" (col. 4, lines 27-30).

In *Suda*, the frame counter and the block selection circuit do not receive input derived from the image data in which the electronic watermark has already been embedded (see Figs. 3 and 6, for example). The frame counter is merely counting the number of frames coming into the compression encoding circuit, and the block selection circuit embeds electronic watermark information into blocks in which motion is detected (col. 4, lines 18-23). The motion detection circuit receives input from the block forming circuit, which receives input only from a camera signal processing circuit (Figs. 3 and 6; col. 2, line 64-col. 3, line 18). It therefore can be seen that neither the frame counter nor the block selection circuit are supplied with input derived from image data in which electronic watermark data has been embedded. The frame counter merely counts the number of frames which come from the compression encoding circuit, and the output of the frame counter is provided at a predetermined (or random) frame interval (col. 4, lines 27-30; col. 5, lines 62-63). The frame counter does not output encoding information. The block selection circuit performs a processing of the embedded watermark in a predetermined number

of blocks according to a signal from the motion detection circuit, but the block selection circuit does not output encoding information.

Suda further discloses the use of a decoding circuit and watermark separation circuit for detecting the decoding information as written to a recording medium (Fig. 1; col. 3, lines 19-40). The decoding circuit and watermark separation circuit do not process the image during the recording process, but operate on an already-processed image, such that the decoding circuit and watermark separation circuit do not feed back embedded watermark and/or image information to be used in the embedding process (Fig. 1; col. 3, lines 19-40). Further, the camera signal processing circuit, compression encoding circuit, and the recording and reproducing circuit are not disclosed or suggested to operate or receive input from the decoding circuit and watermark separation circuit during the reproduction process.

Applicants' claim 1 recites "encoding information detecting means for detecting encoding information from the image data in which the electronic watermark has been embedded and which has been encoded, and feeding the detected encoding information back to the electronic watermark embedding means" with the "electronic watermark embedding means controlling an amount of the electronic watermark data to be embedded in the image data according to the image information amount signal detected by said image information amount detecting means and the encoding information detected by said encoding information detecting means and fed back to the electronic watermark embedding means." *Suda* does not disclose or suggest these limitations, as discussed above, such that *Suda* cannot anticipate Applicants' claim 1 or dependent claims 4, 13-15, and 18.

Applicants' other independent claims also recite limitations that are not disclosed or suggested by *Suda* as discussed above. For example, claims 2, 3, 7, 8, and 9 recite "feeding the detected encoding information back to the electronic watermark embedding means" and controlling an amount of the electronic watermark data to be embedded in the image data according to the image information amount signal and the fed-back encoding information. Claims 19 and 20 recite "feeding the converted image information signal back to the electronic watermark embedding means." Claim 21 recites "outputting a signal representing the detected amount of information to be fed back to the electronic watermark embedding means." Claims

22-25 require feeding the image information amount signal back to the electronic watermark embedding means, where the image information amount signal is generated after embedding. Claims 26-28 recite "feeding the detected electronic watermark information back to the electronic watermark data embedding means." Claim 40 recites "detecting and feeding back information regarding the electronic watermark in the image data in which the electronic watermark has been embedded." As discussed above, none of these limitations are disclosed or suggested by *Suda*, such that *Suda* cannot anticipate or render obvious independent claims 2, 3, 7, 8, 9, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, and 40, and corresponding dependent claims 5- 6, 10-12, 16-17, and 29-39. Applicants therefore respectfully request that the rejection with respect to claims 1, 2, 4, 5, 7, 8, 10, 11, 15, 16, and 18 be withdrawn.

III. Rejection under 35 U.S.C. §103

(a) Suda in view of Rhoads

Claims 3, 6, 9, 12, 17, and 19-25 are rejected under 35 U.S.C. §103(a) as being obvious over *Suda* in view of *Rhoads* (US 5,748,763). As discussed above, *Suda* does not render any of these claims obvious. *Rhoads* does not make up for the deficiencies in *Suda* with respect to these claims. *Rhoads* is cited as teaching, for example, the use of a scaler to determine the strength of a watermark (OA p. 11). Such teaching would not make up for the deficiency in *Suda* with respect to these claims. The scalers of *Rhoads* are located inside the real-time encoder, and do not receive or provide encoding information detected from the encoded and embedded image (Fig. 6, col. 18, lines 15-59). *Rhoads* does not teach or suggest, as recited in claims 3, 6, 9, 12, 17, and/or 19-25: feeding the detected encoding information back to the electronic watermark embedding means and controlling an amount of the electronic watermark data to be embedded in the image data according to the image information amount signal and the fed-back encoding information; feeding the converted image information signal back to the electronic watermark embedding means; outputting a signal representing the detected amount of information to be fed back to the electronic watermark embedding means; or feeding the image information amount signal back to the electronic watermark embedding means, where the image information amount signal is generated after embedding. As such, claims 3, 6, 9, 12, 17, and 19-25 cannot be

rendered obvious by *Suda* and *Rhoads*, alone or in combination. Applicants therefore respectfully request that the rejection with respect to claim 3, 6, 9, 12, 17, and 19-25 be withdrawn.

(b) *Suda* in view of *Matsumura*

Claims 13, 14, 26, 27, 29, 30, 32, and 39 are rejected under 35 U.S.C. §103(a) as being obvious over *Suda* in view of *Matsumura* (US 2001/0010707). As discussed above, *Suda* does not render any of these claims obvious. *Matsumura* does not make up for the deficiencies in *Suda* with respect to these claims. *Matsumura* is cited as teaching, for example, "encoding information detection means outputting, as the encoding information, at least one of a quantizer scale code value, an MQUANT value, and a quantizer matrix value in an ISO/IEC standard 13818 (to be abbreviated as MPEG2 herebelow" (OA p. 26). Such teaching would not make up for the deficiency in *Suda* with respect to these claims. *Matsumura* is directed to an image signal transcoder capable of decoding a signal in a first standard, such as MPEG2, and encoding the information in another standard, such as DV (paragraphs [0002] and [0011]-[0018]). *Matsumura* does not teach or suggest, as recited in claims 13, 14, 26, 27, 29, 30, 32, and/or 39: feeding the detected encoding information, or detected watermark, back to the electronic watermark embedding means and controlling an amount of the electronic watermark data based thereon. As such, claims 13, 14, 26, 27, 29, 30, 32, and 39 cannot be rendered obvious by *Suda* and *Matsumura*, alone or in combination. Applicants therefore respectfully request that the rejection with respect to claim 13, 14, 26, 27, 29, 30, 32, and 39 be withdrawn.

(c) *Suda* in view of *Rhoads* and *Matsumura*

Claims 28, 31, and 40 are rejected under 35 U.S.C. §103(a) as being obvious over *Suda* in view of *Rhoads* and further in view of *Matsumura*. As discussed above, *Suda* does not render any of these claims obvious. *Rhoads* and *Matsumura* does not make up for the deficiencies in *Suda* with respect to these claims. As discussed above, neither *Rhoads* nor *Matsumura* teaches or suggests feeding the detected electronic watermark information back to the electronic watermark data embedding means, or detecting and feeding back information regarding the

electronic watermark in the image data in which the electronic watermark has been embedded, as required by claims 28, 31, and/or 40. As such, claims 28, 31, and 40 cannot be rendered obvious by *Rhoads* and *Matsumura*, alone or in combination. Applicants therefore respectfully request that the rejection with respect to claims 28, 31, and 40 be withdrawn.

(d) *Suda* in view of *Matsumura* and *Florencio*

Claims 33-36 are rejected under 35 U.S.C. §103(a) as being obvious over *Suda* in view of *Matsumura* and further in view of *Florencio* (US 6,208,745). As discussed above, the combination of *Suda* and *Matsumura* does not render any of these claims obvious (these claims depending from claims 26-28). *Florencio* does not make up for the deficiencies in *Suda* and *Matsumura* with respect to these claims. *Florencio* is cited as teaching, for example, decreasing "the amount of an electronic watermark to be embedded in the image data within a predetermined range" (OA p. 35). Such teaching would not make up for the deficiency in *Suda* and *Matsumura* with respect to these claims. *Florencio* is directed to inserting watermark information directly into an encoded video stream by replacing blocks in the video stream with blocks containing watermark information (col. 2, lines 22-43). As can be seen in Fig. 2, however, the watermark encoder of *Florencio* does not receive a feedback signal based on the embedded image data. As *Florencio* does not teach or suggest "feeding the detected electronic watermark information back to the electronic watermark data embedding means," *Florencio* cannot render claims 33-36 obvious, either alone or in combination with *Suda* and *Matsumura*. Applicants therefore respectfully request that the rejection with respect to claims 33-36 be withdrawn.

(e) *Suda* in view of *Rhoads*, *Matsumura*, and *Florencio*

Claims 37 and 38 are rejected under 35 U.S.C. §103(a) as being obvious over *Suda* in view of *Rhoads* and *Matsumura* and further in view of *Florencio*. These claims depend from claim 28, which is not rendered obvious by *Suda*, *Rhoads*, and *Matsumura* as discussed above. *Florencio* does not make up for the deficiencies in *Suda*, *Rhoads*, and *Matsumura* with respect to these claims, as *Florencio* fails to teach or suggest, as discussed above, "feeding the

detected electronic watermark information back to the electronic watermark data embedding means" and "controlling strength of the electronic watermark data to be embedded in the image data according to the detected electronic watermark information." As such, claims 28, 27, and 38 cannot be rendered obvious by *Suda, Rhoads, Matsumura*, and *Florencio*. Applicants therefore respectfully request that the rejection with respect to claims 37 and 38 be withdrawn.

IV. Amendment to the Claims

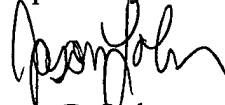
Unless otherwise specified, amendments to the claims are made for purposes of clarity, and are not intended to alter the scope of the claims or limit any equivalents thereof. The amendments are supported by the specification and do not add new matter to the specification.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,



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